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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/580,683	05/30/2000	Hoon Chang	678-498	1775

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Paul J. Farrell, Esq.
DILWORTH & BARRESE
333 Earle Ovington Boulevard
Uniondale, NY 11553

EXAMINER

NGUYEN, STEVEN H D

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 10/04/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/580,683

Applicant(s)

CHANG ET AL.

Examiner

Steven HD Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2, 4-6 and 9 are rejected under 35 U.S.C. 102(a) as being anticipated by Agarwal (WO 99/04521).

Agarwal discloses (Figs 1-13 and Pages 1-61) a system and method for transmitting data in a mobile communication system comprising the steps of segmenting a data stream into at least one consecutive frame having a variable data length, the data stream being segmented into a plurality of consecutive blocks having a variable data length which is a size is smaller than a predetermined size, each said consecutive block being segmented into a plurality of sub-consecutive blocks having a byte length (Page 26, lines 8-23 discloses a data stream is divided into the variable sized packets which is divided into the smaller packets); attaching, at each head of the consecutive frames, a header including a first set of bits indicating the sequence number of a consecutive block corresponding to the head and a second set of bits indicating the sequence number of a sub-consecutive block corresponding to the head and an indicator for indicating the last sub-block; and transmitting the header-attached consecutive frames (Page 26, lines 24 to page 27, lines 21; See Fig 7b, L is last sub-block, Packet sequence number, sub-block

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sequence number SARid, Fig 13, Packet # is packet sequence number and seq # is sub-block sequence number).

3. Claims 1, 4-5 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Van Nobelen (USP 6353907).

Van Nobelen a system and method (Figs 1-16 and col. 1, lines 18 to col. 15, lines 33) for transmitting data in a mobile communication system comprising the steps of segmenting a data stream into at least one consecutive frame having a variable data length, the data stream being segmented into a plurality of consecutive blocks having a variable data length which is a size is smaller than a predetermined size, each said consecutive block being segmented into a plurality of sub-consecutive blocks having a byte length (col. 4, lines 28-53); attaching, at each head of the consecutive frames, a header including a first set of bits indicating the sequence number of a consecutive block corresponding to the head and a second set of bits indicating the sequence number of a sub-consecutive block corresponding to the head; and transmitting the header-attached consecutive frames (Fig 8 wherein the header includes sequence number of the block NB and sub block, NS in the RLP frame).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahmadvand (USP 6542490) in view of Long (USP 5805822) and Cheng (USP 6226301).

Regarding claims 1-6 and 8-9, Ahmadvand discloses (Figs 1-5 and col. 1, lines 5 to col. 9, lines 10) a system and method for transmitting data in a mobile communication system comprising the steps of segmenting a data stream into at least one consecutive frame having a variable data length, the data stream being segmented into a plurality of consecutive blocks having a variable data length which is a size is smaller than a predetermined size (Fig 3, Ref 32 segments the IP packets into variable length of LAC frames which includes a sequence number, then encapsulated them into RLP frames for transmitting via wireless channels). However, Ahmadvand fails to disclose each said consecutive block being segmented into a plurality of sub-consecutive blocks having a byte length attaching, at each head of the consecutive frames, a header including a first set of bits indicating the sequence number of a consecutive block corresponding to the head and a second set of bits indicating the sequence number of a sub-consecutive block corresponding to the head and an indicator for indicating the last sub-block; and transmitting the header-attached consecutive frames. In the same field of endeavor,

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Long discloses (Figs 1-9 and col. 1, lines 15 to col. 14, lines 67) each said consecutive block being segmented into a plurality of sub-consecutive blocks having a byte length attaching, at each head of the consecutive frames, a header including a first set of bits indicating the sequence number of a consecutive block corresponding to the head and a second set of bits indicating the sequence number of a sub-consecutive block corresponding to the head and an indicator for indicating the last sub-block (Fig 2, a method of segmenting data stream into the block and then segment them sub-block and attach a header having segment number, 30, and sub segment number 32, and an indicator for indicating the last sub-block, Ref 34; See col. 12, lines 4-45 and col. 6, lines 15 to col. 7, lines 50) and a method and system for segmenting the size of the block according to the requested size (Col.1, lines 1-21). However, Ahmadvand and Long fails to disclose the RLP frame that includes a sequence number in the header. In the same field of endeavor, Cheng disclose a method and apparatus for segmentation and reassembly the data stream into RLP frame having sequence number (Fig 3-5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a method and apparatus for segmenting the data stream into the block then sub segment the blocks into the sub block and attaching a header with the sequence numbers as disclosed by Long and RLP frame with sequence number as disclosed Cheng into Ahmadvand's system. The motivation would have been to prevent the loss of transmitting data.

Regarding claim 7, Ahmadvand, Long and Cheng do not disclose a forward resequencing for storing the transmitted frame in order to retransmit the transmitted frame. However, the examiner takes an official notice that a method and apparatus for shorting the packet according to the sequence number is well known and expected in the art at the time invention was made

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into the system of Ahmadvand, Long and Cheng. The motivation would have been to reduce the delay time in searching for the retransmitting packet in the buffer.

6. Claims 3 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agarwal as applied to claims 1 and 5 above, and further in view of Barrett (USP 5546549).

Regarding claims 3 and 8, Agarwal fails to disclose the size of each consecutive block included in each consecutive frame is determined to a requested size. However, Barret discloses a method and system for segmenting the size of the block according to the requested size (Col.12, lines 5-36).

Since, Agarwal suggest the use of transmitting the data stream according to the bandwidth on the demand. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a method of segmenting the data stream into the blocks according the requested size as disclosed by Barret's system. The motivation would have been to prevent the loss of transmitting data.

Regarding claim 7, Agarwal does not disclose a forward resequencing for storing the transmitted frame in order to retransmit the transmitted frame. However, the examiner takes an official notice that a method and apparatus for shorting the packet according to the sequence number is well known and expected in the art at the time invention was made into Agarwal's system. The motivation would have been to reduce the delay time in searching for the retransmitting packet in the buffer.

7. Claims 2-3 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Nobelen as applied to claims 1 and 5 above, and further in view of Barrett (USP 5546549).

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Van Nobelen fails to disclose the claimed invention, However, in the same field of endeavor, Long discloses (Figs 1-9 and col. 1, lines 15 to col. 14, lines 67) each said consecutive block being segmented into a plurality of sub-consecutive blocks having a byte length attaching, at each head of the consecutive frames, a header including a first set of bits indicating the sequence number of a consecutive block corresponding to the head and a second set of bits indicating the sequence number of a sub-consecutive block corresponding to the head and an indicator for indicating the last sub-block (Fig 2, a method of segmenting data stream into the block and then segment them sub-block and attach a header having segment number, 30, and sub segment number 32, and an indicator for indicating the last sub-block, Ref 34; See col. 12, lines 4-45 and col. 6, lines 15 to col. 7, lines 50) and a method and system for segmenting the size of the block according to the requested size (Col.1, lines 1-21) and the examiner takes an official notice that a method and apparatus for shorting the packet according to the sequence number is well known and expected in the art at the time invention was made and apply a flag to indicate if the last block of the data stream and segmenting the block according to the requested size as disclosed by Long into Van Nobelen's system. The motivation would have been to reduce the delay time in searching for the retransmitting packet in the buffer and prevent data loss.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven HD Nguyen whose telephone number is (703) 308-8848. The examiner can normally be reached on 8-5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on (703) 308-6602. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

A handwritten signature in black ink, appearing to read 'Steven HD Nguyen', with a long horizontal line extending to the right.

Steven HD Nguyen
Primary Examiner
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September 26, 2003